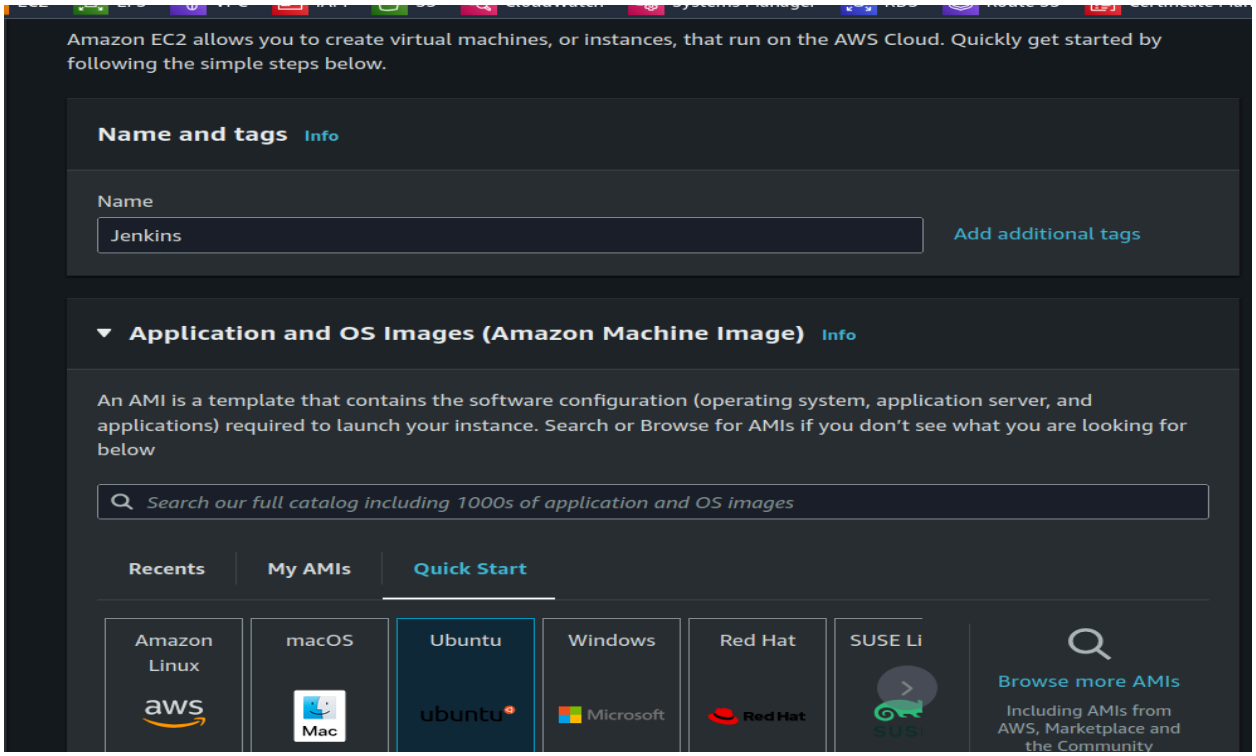
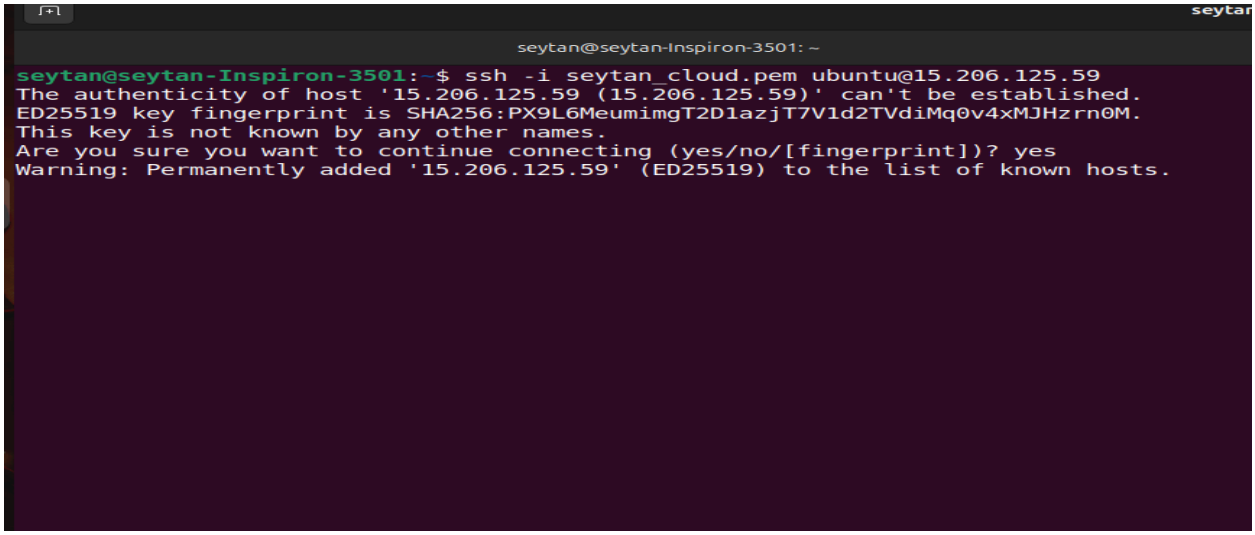
Task : Jenkins-CI_CD-Pipeline-for-Insure-Me-Project

Step 1: Create and Launch an ec2 Instance.



Take ssh of it →ssh -i private.pem user@public_ip

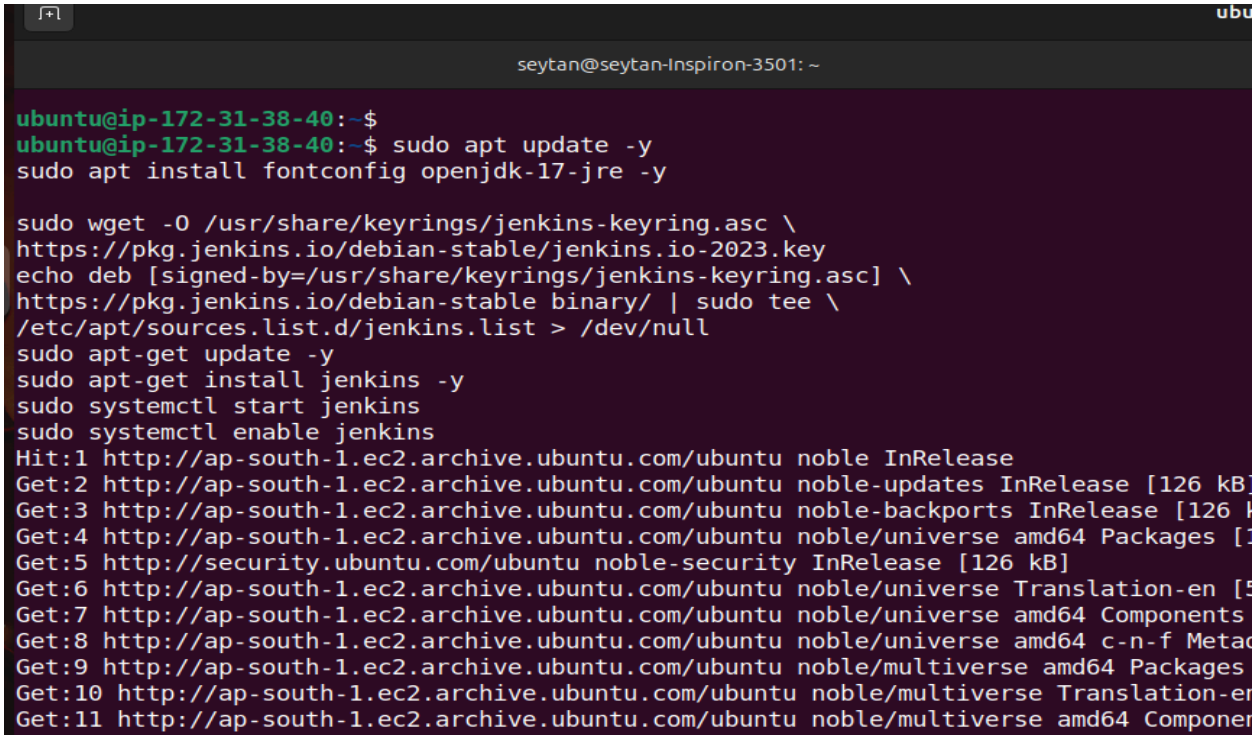


Step 2: Install the Jenkins tool.

Commands

→ sudo apt update -y
sudo apt install fontconfig openjdk-17-jre -y

sudo wget -O /usr/share/keyrings/jenkins-keyring.asc \
https://pkg.jenkins.io/debian-stable/jenkins.io-2023.key
echo deb
[signed-by=/usr/share/keyrings/jenkins-keyring.asc] \
https://pkg.jenkins.io/debian-stable binary/ | sudo tee \
/etc/apt/sources.list.d/jenkins.list > /dev/null
sudo apt-get update -y
sudo apt-get install jenkins -y
sudo systemctl start jenkins
sudo systemctl enable jenkins



Step 3:Install Docker and Maven .(reuired to build image and container)

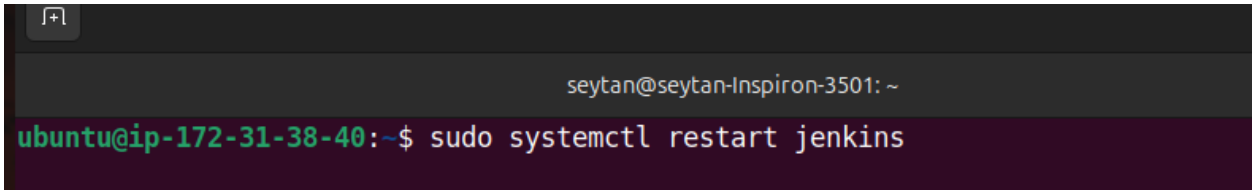
Commands→

for pkg in docker.io docker-doc docker-compose docker-compose-v2 podman-docker containerd runc; do sudo apt-get remove $pkg; done

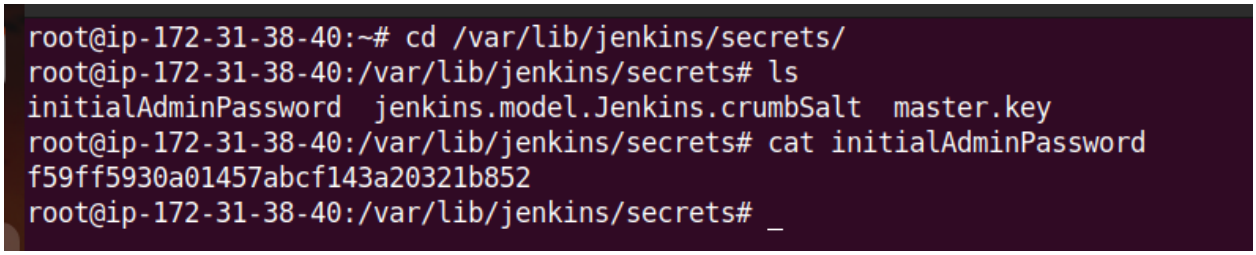
# Add Docker's official GPG key:
sudo apt-get update -y
sudo apt-get install ca-certificates curl -y
sudo install -m 0755 -d /etc/apt/keyrings
sudo curl -fsSL https://download.docker.com/linux/ubuntu/gpg -o /etc/apt/keyrings/docker.asc
sudo chmod a+r /etc/apt/keyrings/docker.asc

Add the repository to Apt sources:
echo \
  "deb [arch=$(dpkg --print-architecture) signed-by=/etc/apt/keyrings/docker.asc] https://download.docker.com/linux/ubuntu \
  $(. /etc/os-release && echo "$VERSION_CODENAME") stable" | \
  sudo tee /etc/apt/sources.list.d/docker.list > /dev/null
sudo apt-get update -y
sudo apt-get install docker-ce docker-ce-cli containerd.io docker-buildx-plugin docker-compose-plugin -y

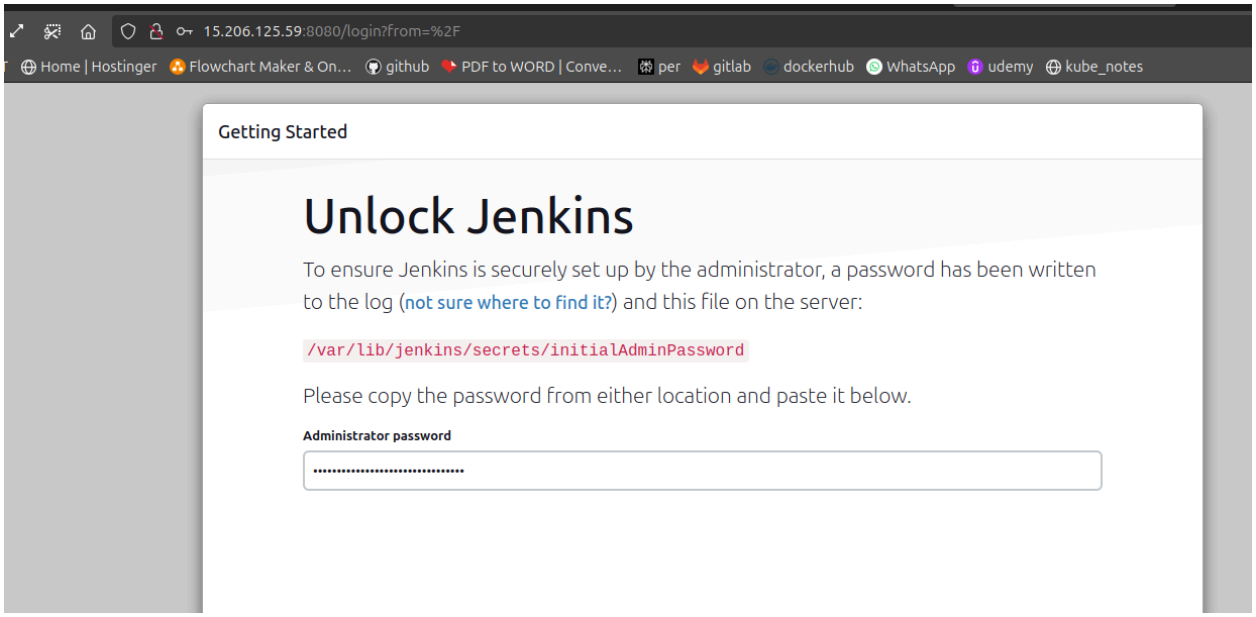
sudo docker --version
Sudo apt install maven -y
Sudo usermod -aG docker jenkins
Sudo systemctl restart jenkins



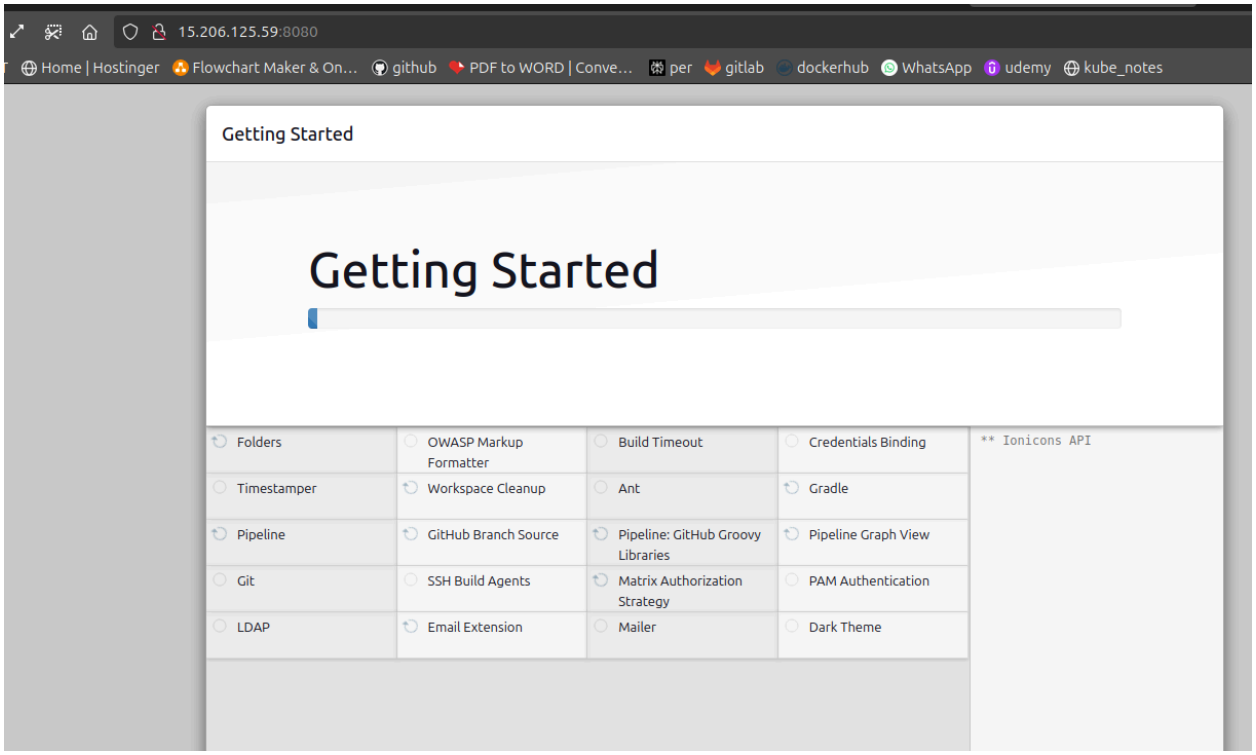
Step 4: Now Navigate to the /var/lib/jenkins/secrets folder and copy the password from initialAdminpassword file.



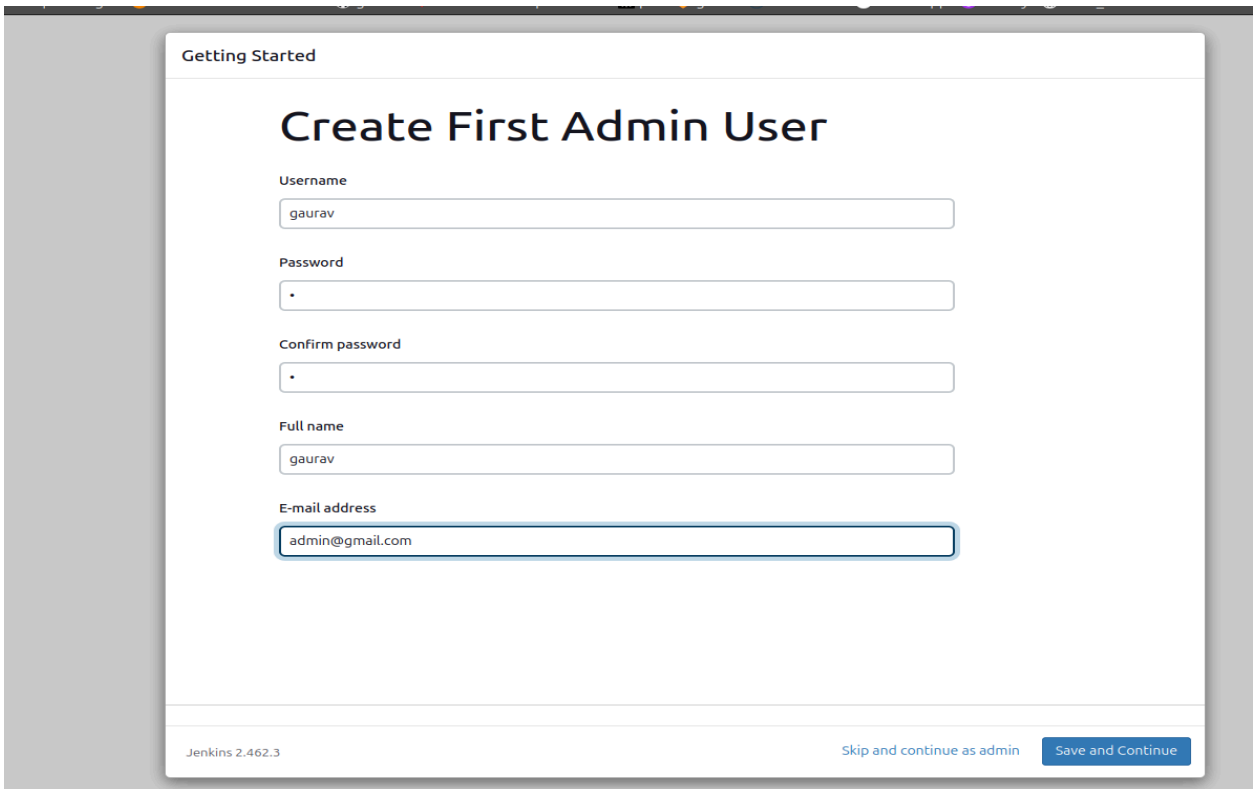
After this paste the public ip of instance in the web-browser and port 8080 which is default port of jenkins.



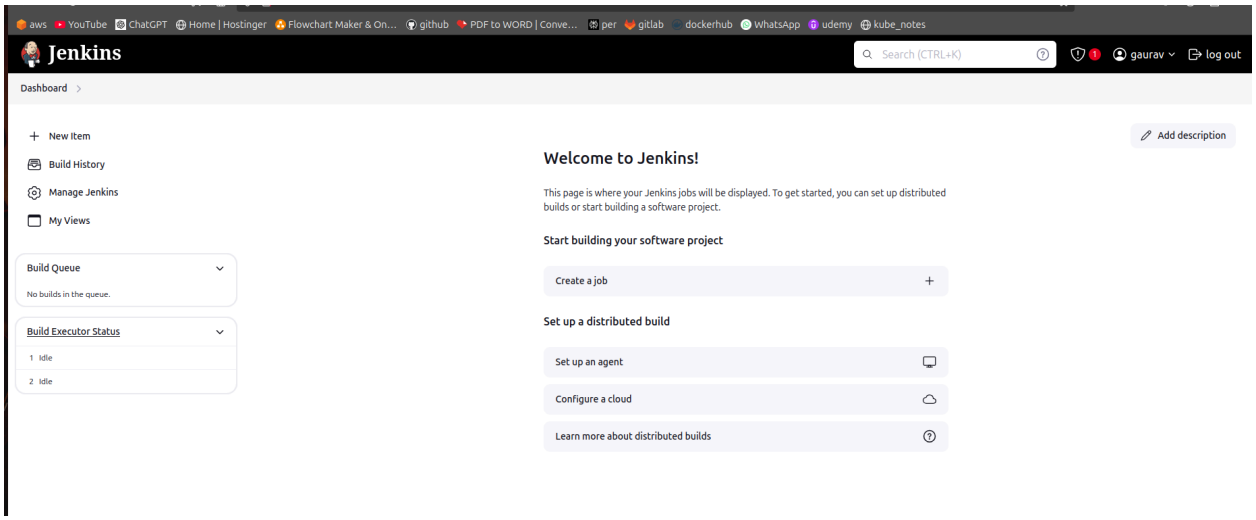
Step 5: Install the default plugins.



Step 6: After installing plugins it will ask to create admin user enter the details and continue.

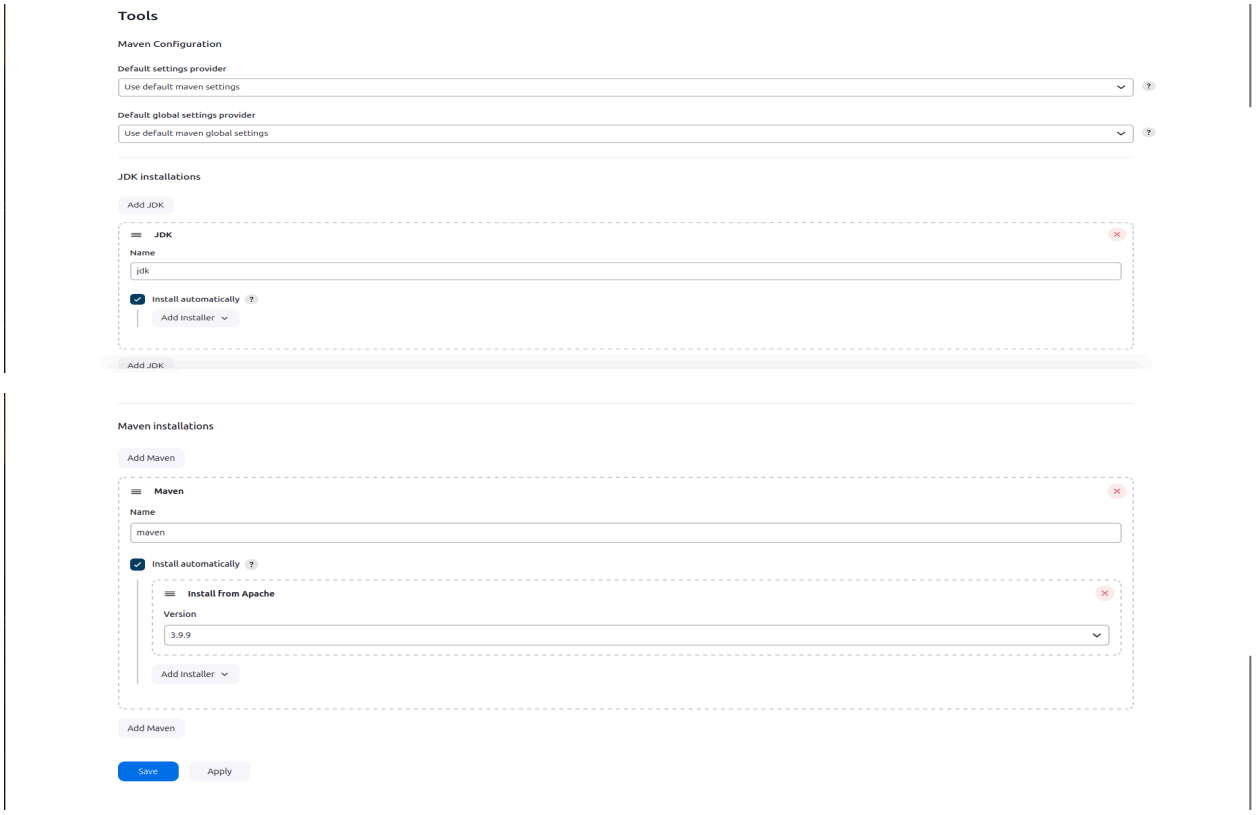


Output :

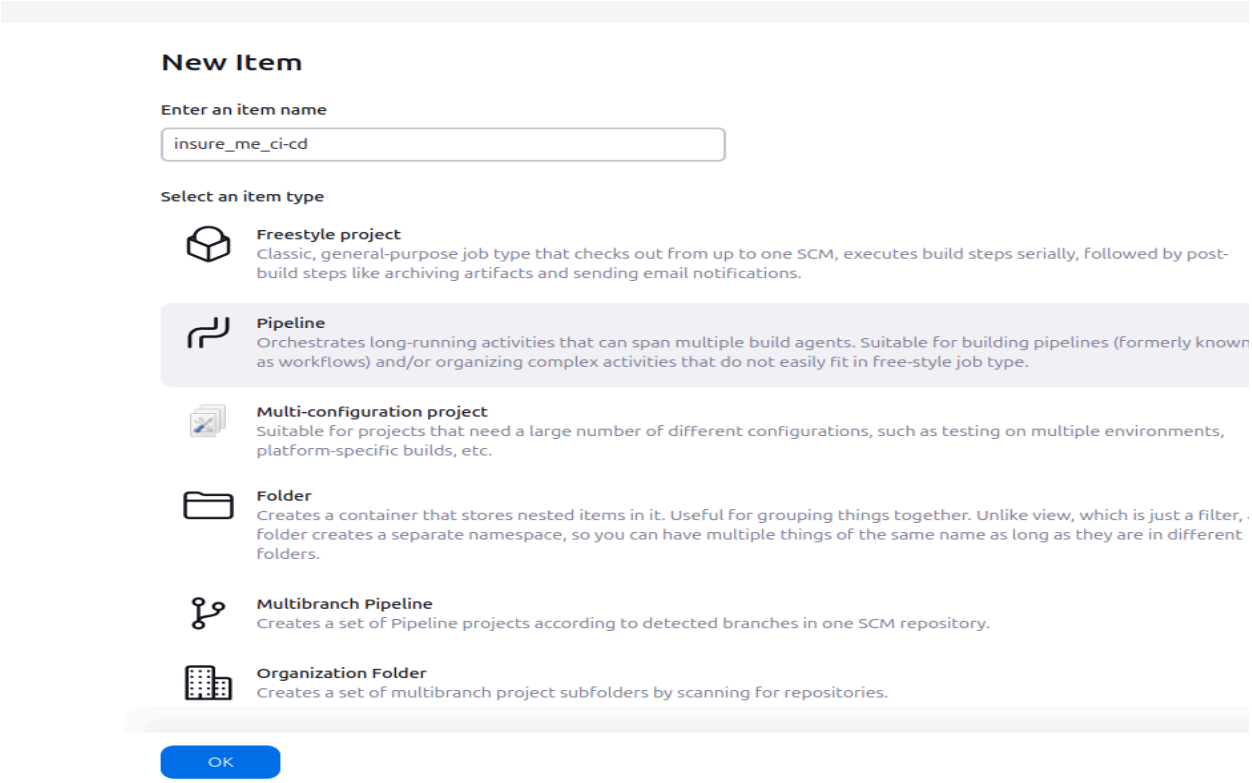


Step 7:Install the essential plugins from the Manage jenkins tab .

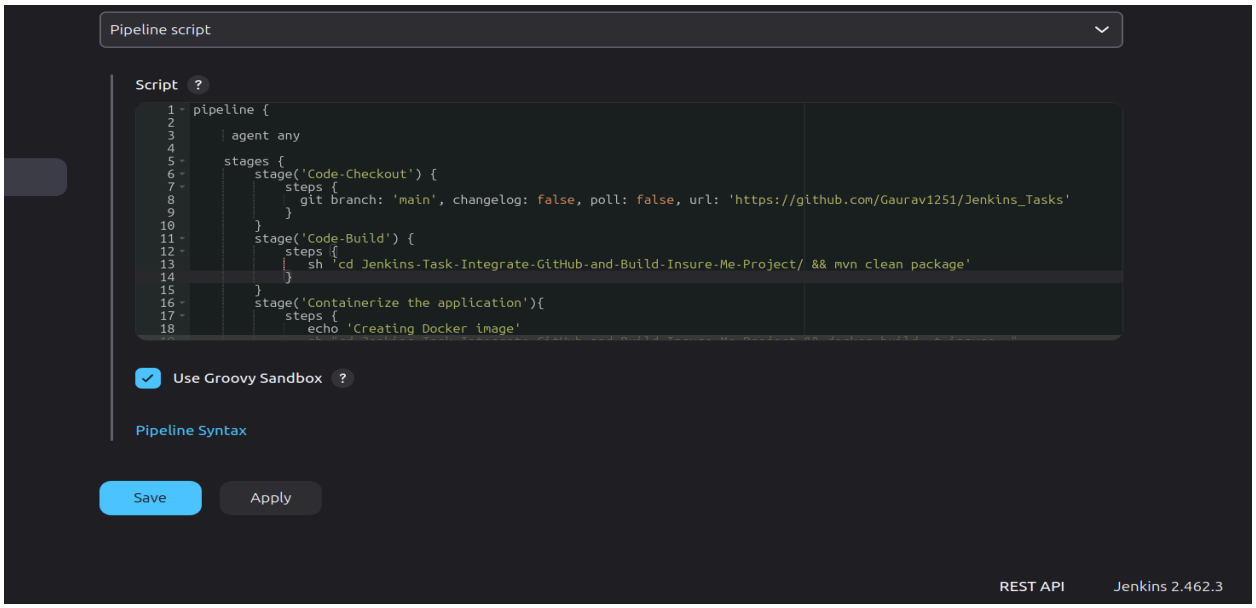
After this we can configure the plugins in the Tools section.



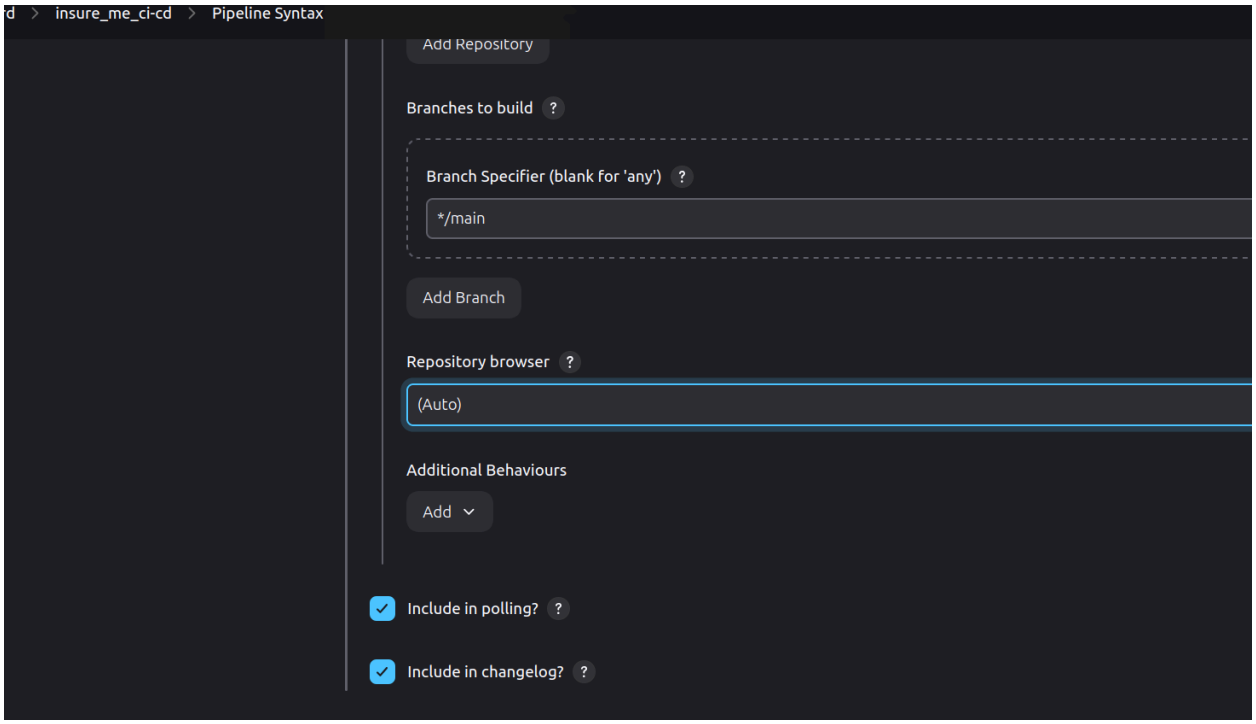
Step 8: Now click on new job and create a pipeline .



Step 9: After this go to the configure section and write script for our pipeline.



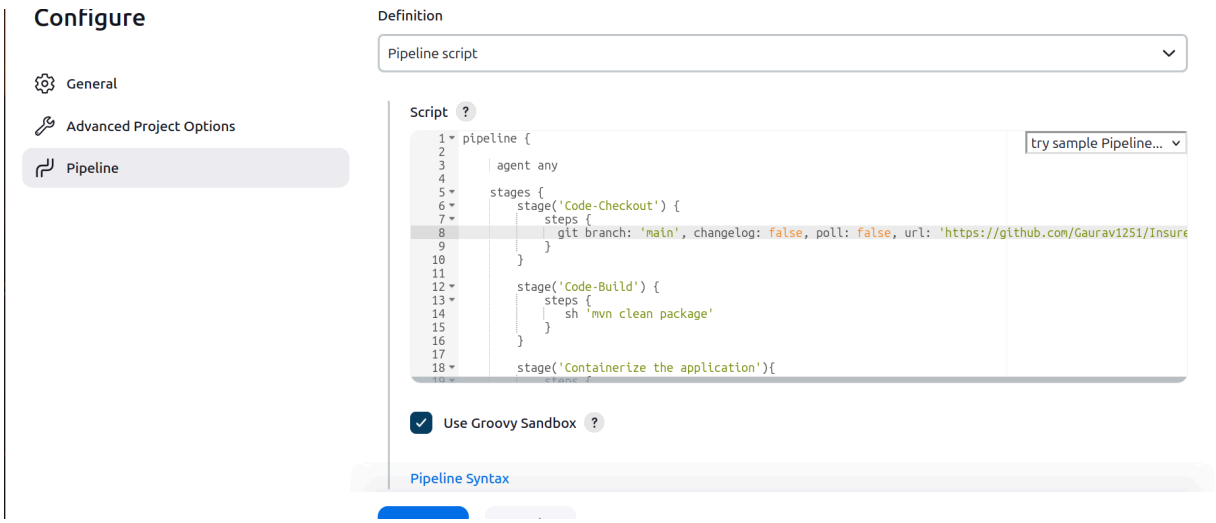
Now for the checkout stage we require a github repo.
So we will generate a Pipeline syntax for it using the Pipeline Syntax button.



Here we select source as checkout from version control and give the repo url and branch name from where we want to clone the code.

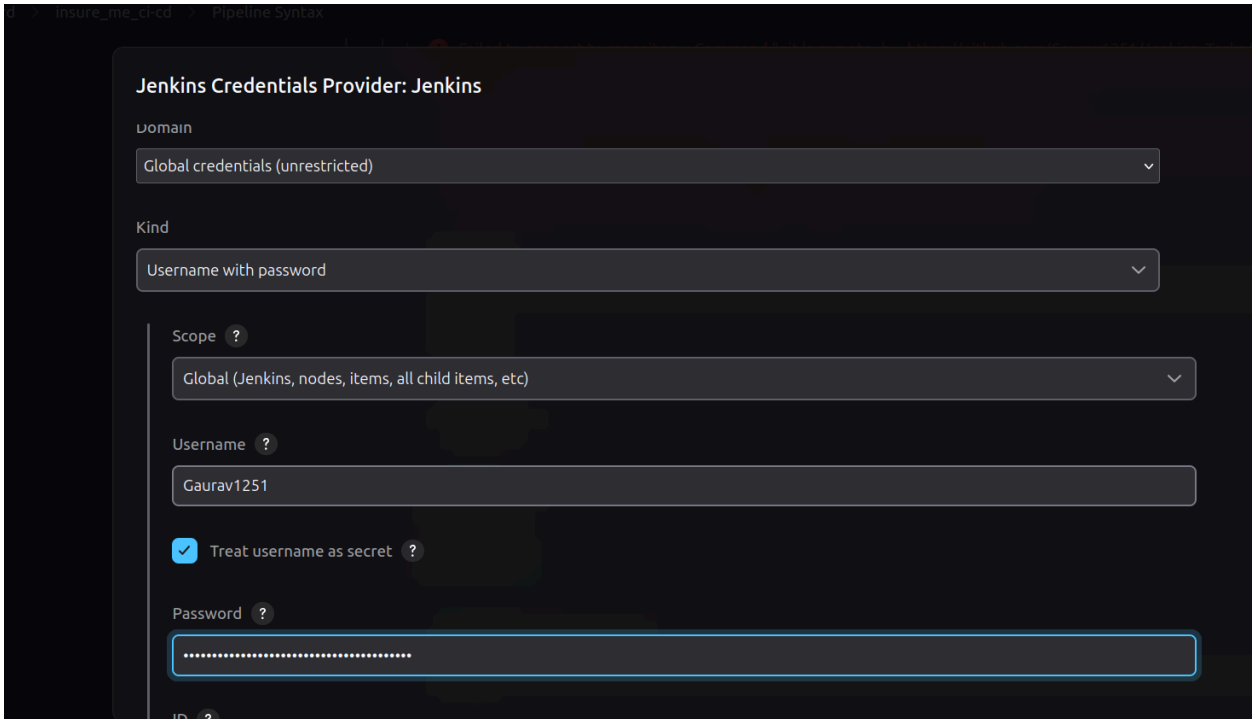
If repo is Private we need to provide credentials.

Now apply and save the script .



Step 10: Now we need the docker push script so we have to generate one more pipeline syntax for logging to dockerhub .

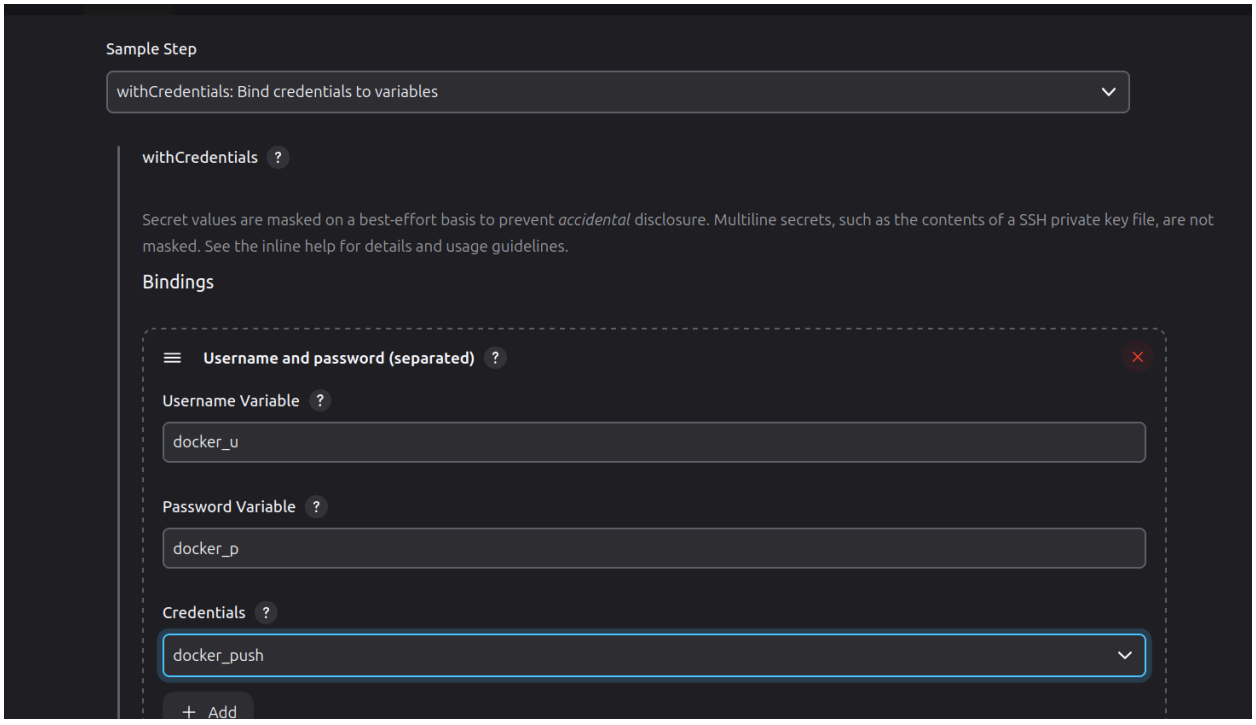
For that 1st create credentials.



After creating credentials , go to pipeline syntax and select

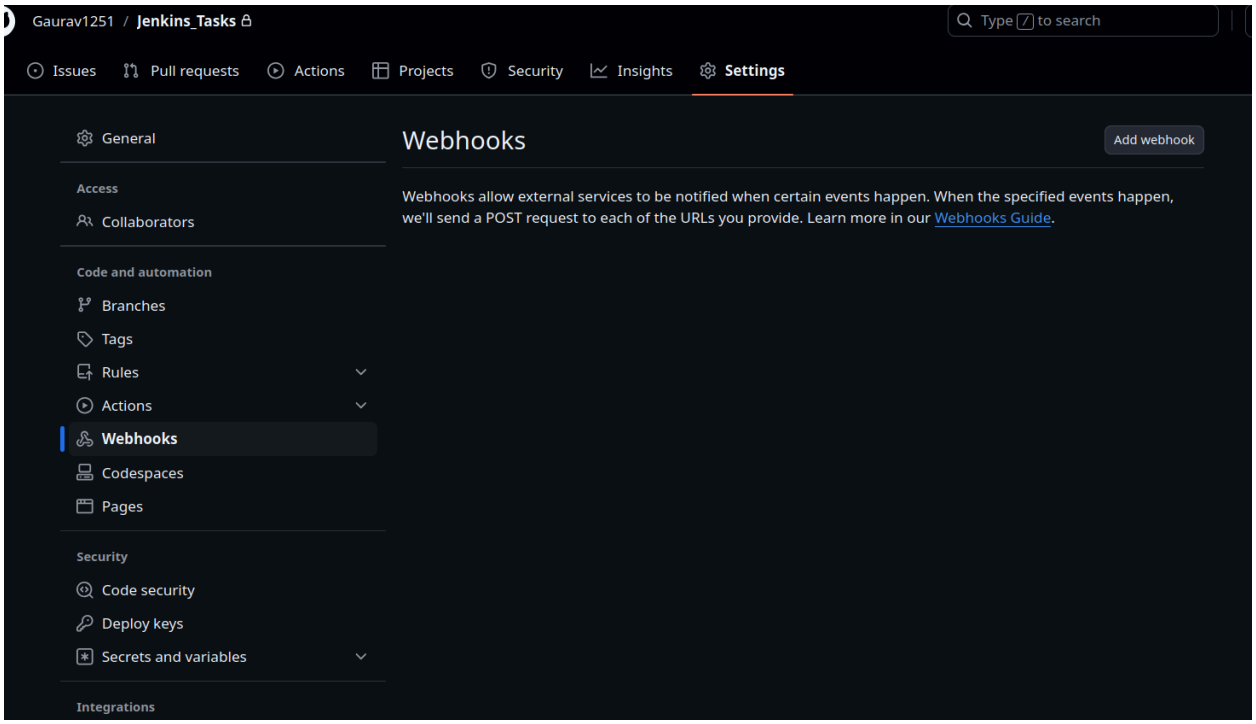
withCredential:bind credentials to variables.

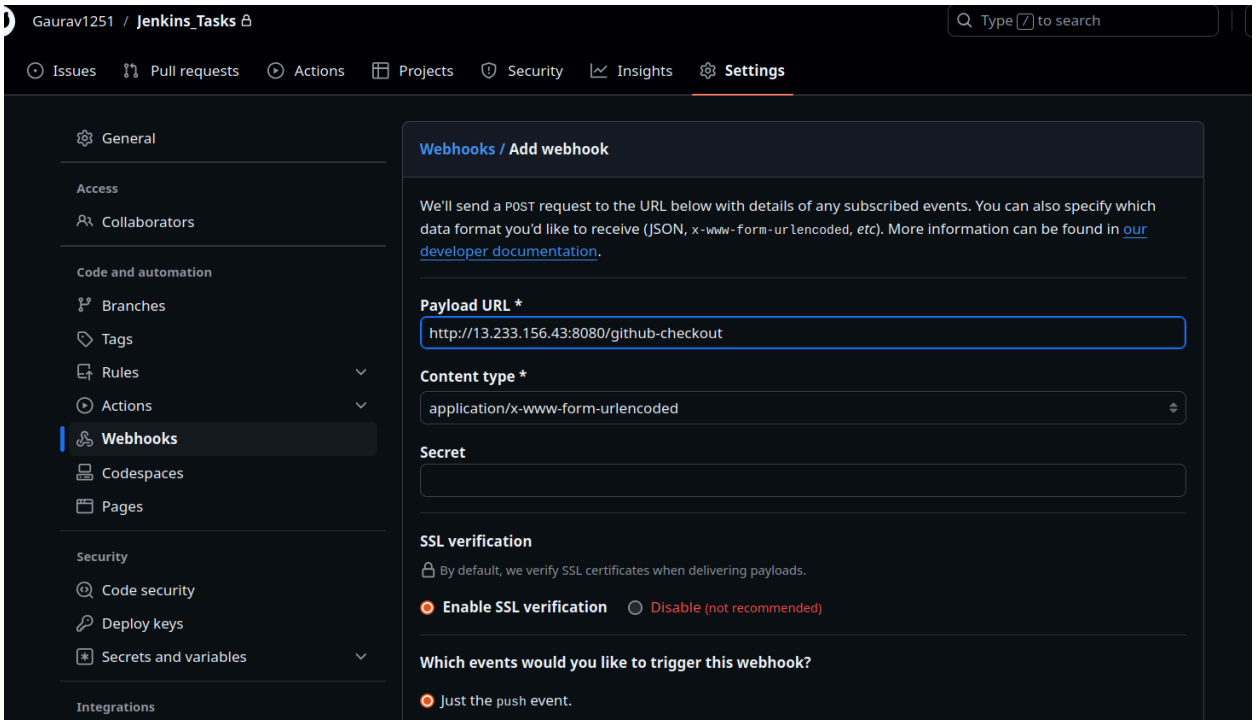
Give username and password variables and generate the script.



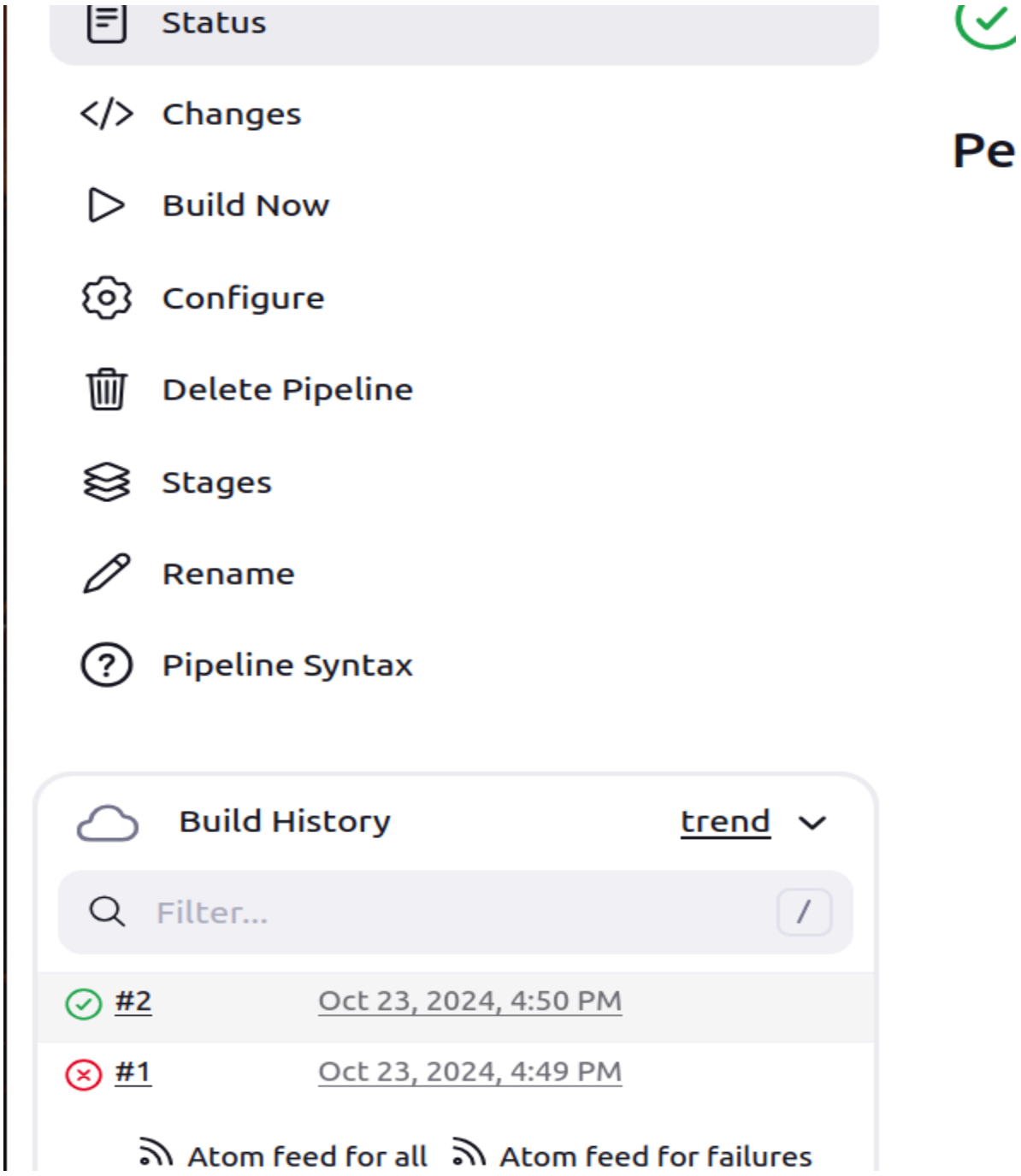
Step 11: Paste this script in the push stage .

Now go to github repo and create a webhook pointing to jenkins url.

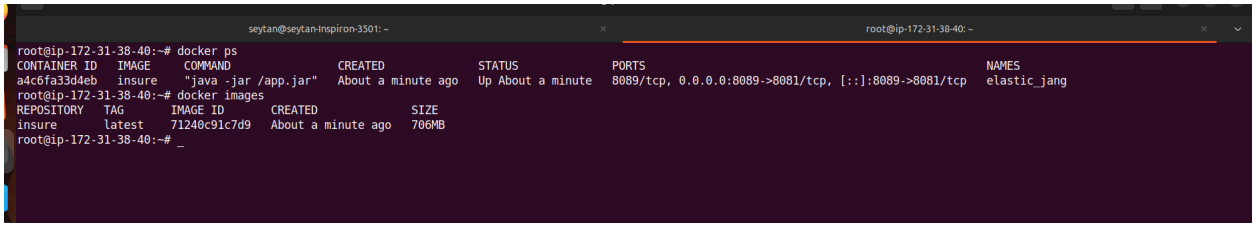


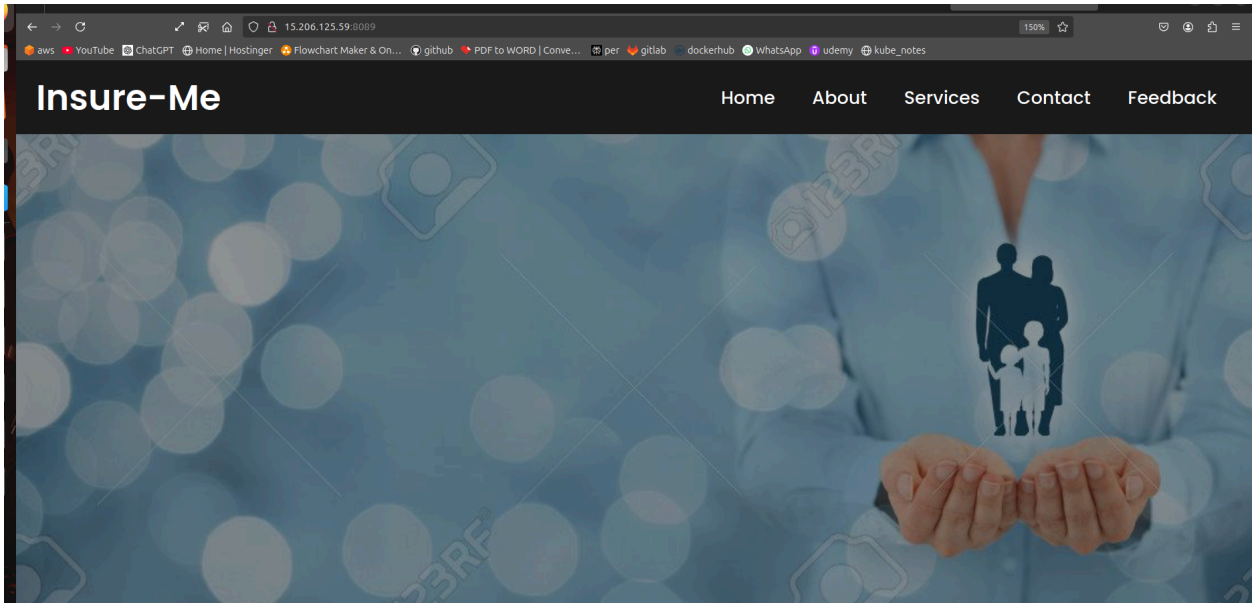


Step 12 : Save and Build the pipeline script.



Step 13: Now go to the instance and check that our images are build and deployed.

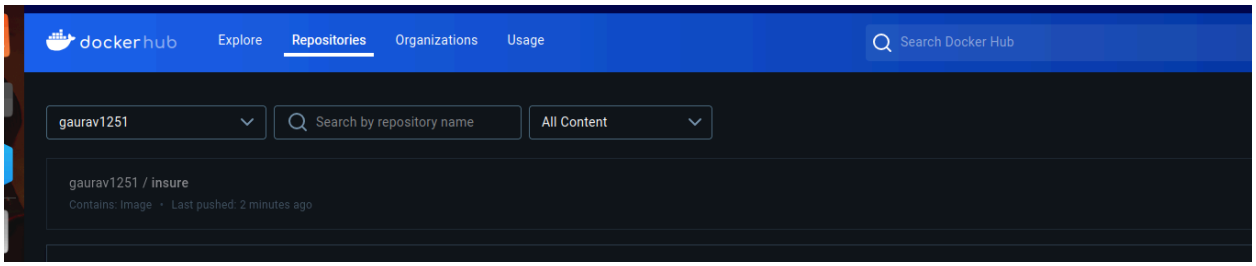


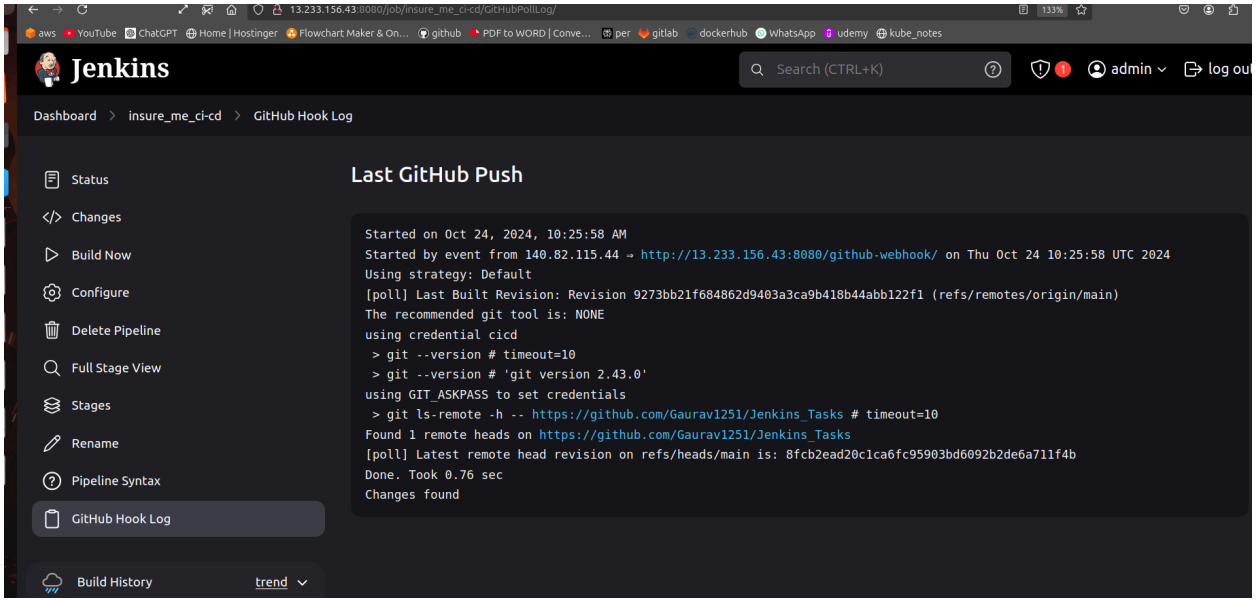


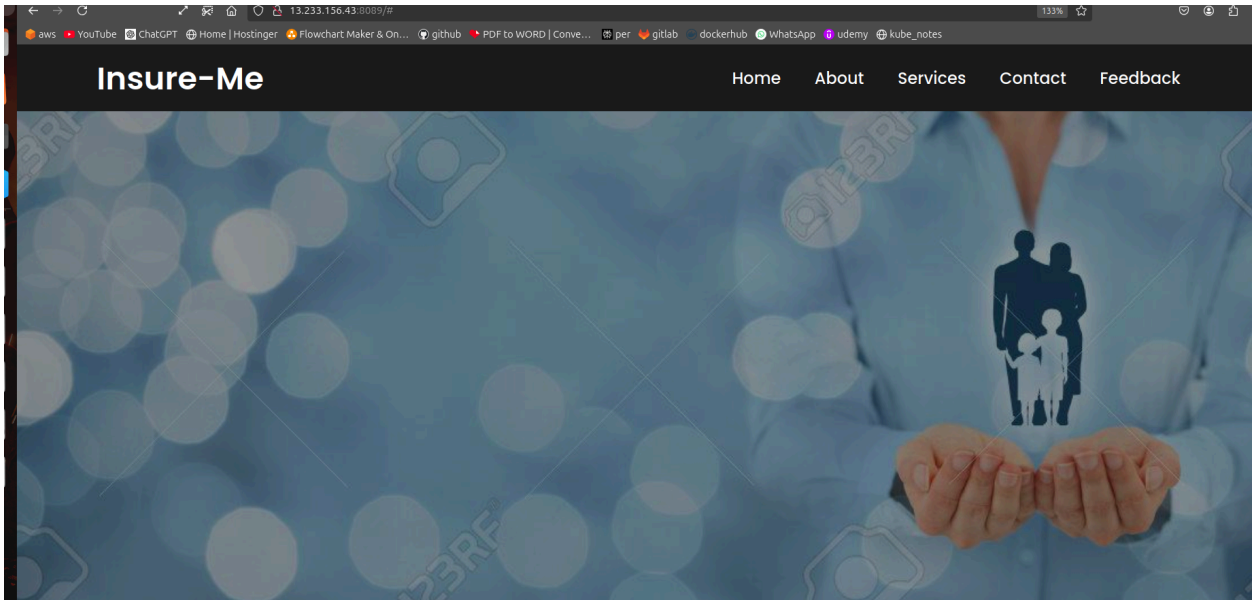
Step 14: Now make some changes to repo and you will see that our pipeline will be triggered and the application will be re-build and re-deployed again.

Output:

Image pushed to dockerhub.




Jenkins
Search (CTRL+K)
admin
log out
Dashboard
insure_me_ci-cd
GitHub Hook Log
Status
Changes
Build Now
Configure
Delete Pipeline
Full Stage View
Stages
Rename
Pipeline Syntax
GitHub Hook Log
Build History
trend
Last GitHub Push
Started on Oct 24, 2024, 10:25:58 AM
Started by event from 140.82.115.44 → http://13.233.156.43:8080/github-webhook/ on Thu Oct 24 10:25:58 UTC 2024
Using strategy: Default
[poll] Last Built Revision: Revision 9273bb21f684862d9403a3ca9b418b44abb122f1 (refs/remotes/origin/main)
The recommended git tool is: NONE
using credential cicd
> git --version # timeout=10
> git --version # 'git version 2.43.0'
using GIT_ASKPASS to set credentials
> git ls-remote -h -- https://github.com/Gaurav1251/Jenkins_Tasks # timeout=10
Found 1 remote heads on https://github.com/Gaurav1251/Jenkins_Tasks
[poll] Latest remote head revision on refs/heads/main is: 8fcb2ead20c1ca6fc95903bd6092b2de6a711f4b
Done. Took 0.76 sec
Changes found


Insure-Me
Home
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